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ABSTRACT

Retention attrition in a special elementary teacher preparation program at the University of British Columbia was studied over a 9-year span with 130 American Indian freshmen. Background variables such as age, gender, marital status/parenthood, ethnic status, entrance year, and locality did not differentiate graduates from non-graduates except that the married student rate of graduation was significantly higher. The freshman Omnibus Personality Inventory (OPI) contrasted significantly with eventual outcome on Impulse Expression, Personal Integration, Anxiety Level, and Response Bias, indicating the lesser socio-emotional adjustment of the non-graduates. Graduates were found to be internally oriented and well-adjusted with positive self-attitude and good academic adjustment. Non-graduates were found to be impulsive with less personal integration, high anxiety, and a more negative self-image. No Intellectual Disposition Category (IDC) differences were found. The findings are discussed in terms of their use and limitation in explaining the complexity of student persistence and the OPI is recommended as an appropriate culturally unbiased psychological tool for use in counseling American Indian university students. Freshmen mean t-scores on the 14 OPI and IDC scales are provided.
(Author/LFL)

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Socio-Psychological and Background Variables
of Native Indian University Students
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Abstract

One hundred and thirty Native Indian freshmen in a special teacher preparation program were followed-up in a longitudinal study of persistence. Selected background variables did not differentiate graduates from non-graduates except that the married student rate of graduation was significantly higher. The freshman Omnibus Personality Inventory (OPI) contrasted significantly with eventual outcome on Impulse Expression (IE), Personal Integration (PI), Anxiety Level (AL) and Response Bias (RP)--all indicating the lesser socio-emotional adjustment of the non-graduates. No Intellectual Disposition (IDC) differences were found. The findings are discussed in terms of their use and limitation in explaining the complexity of the retention/attrition phenomenon. The OPI had culture free predictive validity and the findings highly recommend the instrument as an appropriate psychological tool in counseling Native Indian students within the often stressful, bicultural situation that university attendance incurs.

Socio-psychological and Background Variables
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and Persistence in a Teacher Preparation Program

Introduction

The Native Indian Teacher Education Program (NITEP) at the University of British Columbia is an example of a special, four-year program to prepare Native Indians as elementary school teachers (Kirkness & McEachern, 1983). Initiated in response to the needs expressed by Native Indians themselves, the main, long term goal was eventually to place such teachers into the educational system in sufficient numbers to approximate the proportion of Native Indian children in the province's school population. The need was, and remains, great. It has been estimated that twelve to fourteen hundred Native Indian teachers would be required in B.C. alone to meet the compatible teacher/pupil ratio (More & Sterling, 1978). It is envisaged that teachers of Native Indian extraction would be better able to act as positive role models, to bridge the cultural gap, to reduce the high attrition rate for Native Indian students and thus, directly and indirectly, to help in the advancement of their people's relatively low socio-economic position.

NITEP accepted its first students for the fall of 1974, approximately twelve to fifteen individuals at each of four, geographically dispersed centres throughout the province. The first two years would be held in these localities--staffed by a local coordinator and visiting professors from the Faculty of Education--for the logistical convenience to, and more personalized assistance for, the pool of possible registrants in bridging

the demands of university where Native Indians traditionally and significantly have been underrepresented. After these transitional years the last two years would be at U.B.C. In the initial years of the program the four centers were located at North Vancouver, Kamloops, Williams Lake and Terrace which thus ranged, respectively, from the density urbanized southwest corner of the province to the correspondingly more rural and distant location 650 km north of Vancouver.

Data Collection and Rationale

As part of the introductory Educational Psychology component given in the freshman year, the Omnibus Personality Inventory (OPI), Form F (Heist & Yonge, 1971) was administered mid-year to the students in each of the first three entering classes of 1974-75 to 1976-77. The OPI was chosen for both experiential and research possibilities. Because the instrument was constructed especially for use with, and relevance for, college students, it served: as a meaningful, first-hand exposure to the issues of standardized measurement technique, reliability and validity; as an encouragement in one form of self-understanding; and as an adjunct to individual counseling. Furthermore, Native Indian enrolment in any significant numbers at the university level was a relatively recent phenomenon (Wright, 1973) and research on personality measures of Native Indian college students seemed non-existent. Thus the NITEP students generated unique norms, previously unavailable, not only for an important subsample of college students but also for the OPI itself (Whittaker, 1986; Whittaker & Kuijt, 1979).

Instrumentation

The OPI was designed to assess attitudes, values and interests pertinent to the college student within that special, educational context

and is probably the most useful instrument to describe non-clinically selective, personality traits of such individuals and subgroups via normal intellectual, non-authoritarian and socio-emotional adjustment dispositions. The norms are based on freshman students in general. Formulated within the general framework of personality theory, the OPI measures fourteen variables, all within the realm of normality, specifically selected to generate an interpretatively useful profile: Thinking Introversion (TI)--where a high score is in the direction of reflective thought, Theoretical Orientation (TO), Estheticism (Es), Complexity (Co)--interest in complex ideas and situations, Autonomy (Au), Religious Orientation (RO)--universal rather than fundamental beliefs, Social Extroversion (SE), Impulse Expression (IE), Personal Integration (PI), Anxiety Level (AL)--where high is low anxiety, Altruism (Am), Practical Outlook (PO), Masculinity-Femininity (MF), and Response Bias (RB)--where high is a positive impression.

Follow-up

A total of 130 NITEP students completed the OPI in their freshman year at the four centers during those first three years. As to be expected during the following years, some students permanently withdraw from the program, others did so temporarily; those that finished third year requirements and withdrew received the Standard Teaching Certificate; and still others, whether by continuous, part-time and/or interrupted study, fully completed the required or equivalent four years of the program and graduated with a B.Ed. and the concomitant Professional Teaching Certificate. The present study focuses on this latter subgroup of graduates as contrasted with the non-graduating others.

After the ninth year of the program's existence a follow-up survey was performed on the original sample of 130 previously assessed. Approximately one quarter, 24% (31 of 130), had graduated--17 did so in four or less years, 9 took five to six years, 4 took seven to eight, and 1 graduated in nine years. An average of 4.8 years was needed for completion of the degree. Did any factors differentiate these graduates from the other 76% (99 of 130) who did not complete the full requirements?

Results

Background Variables

Age. The background of the entering students was diverse, ranging from recent high school graduates to mature persons, generally with some previous paraprofessional experience with elementary schooling. The sample's average age at initial registration was 25.3 years and ranged in age from 18 to 51 years. The mean age, at time of entrance, of those who eventually graduated was 26.6 years, with the age at entrance of non-graduates being 24.8 years, a statistically non-significant difference, $t(128) = 1.34$.

Gender. Seventy-five percent (98 of 130) of the sample were female. Of these women, 26% (25 of 98) eventually graduated; from the sample's remaining 25% (32 of 130) males, a lesser 19% (6 of 32) were to graduate. Gender and program completion, however, were not significantly differentiated, $\chi^2(1, N = 130) = 0.29$.

Marital status and parenthood. As might be expected because of the average level of maturity of this freshman sample, 31% (40 of 130) were, or had been, married--and of these almost all, 90% (36 of 40), had children, ranging in number from 1 to 6, with an average of 2.0 children. Of these married or previously married students, 35% (14 of 40) graduated--and all

had children (except 1) with an average of 1.7 children. Of the other 65% (26 of 40) of married students who did not graduate, all but 3 had children, with an average number slightly higher at 2.1 children. Thus the number of children the married students had did not relate to their eventual graduation/non-graduation. Nevertheless, the 35% rate of graduation for the married students contrasts significantly with the lower rate of graduation of only 19% (17 of 90) for the freshmen single students, $\chi^2(1, N = 130) = 3.96, p < .05$, suggesting that the maturity, extra motivation and experience of the married students may have contributed to their perseverance.

Status. During the time of the nine years covering this study, Native Indians formally connected to their band reservation were federally recognized as having Indian status whereas those individuals who left the reservation and women who married a non-Native Indian "lost" their Indian status. This status difference had socio-economic ramifications for individuals. The majority, 78% (101 of 130) of the NITEP students in the freshman sample were status Indians and of these, 22% (22 of 101) eventually graduated. Among the remaining freshman sample of students who were non-status Indians, that is 22% (29 of 130), the graduation rate was slightly higher at 31% (9 of 29). The difference was not significant, $\chi^2(1, N = 130) = 1.06$.

Center locality. The four centers theoretically could have attracted students from somewhat culturally different pools of possible recruits and/or that each center's particular ethos would be different and thus interact to be a factor in rate of graduation. These rates were different: the North Vancouver center graduated 38% (12 of 32) of its freshmen in the sample studied, Terrace graduated 23% (9 of 39), Williams Lake graduated

21% (5 of 24), and Kamloops graduated 14% (5 of 35) of its freshmen sample. These trends, with the center which is most urban and also closest to U.B.C. having the highest rate of graduation, however, were not significantly different, $\chi^2(3, N = 130) = 5.18$.

Entrance year. From the first freshman class in the sample, 18% (9 of 49) graduated; 28% (13 of 47) of the second freshman class did so; and 26% (9 of 34) of the third freshman class completed the degree, $\chi^2(2, N = 130) = 1.32$, NS. The indication that the initial year's rate of graduation tended to be lowest might be related to the fact that it was the start-up class of NITEP's instigation and experienced the brunt of program development with all the attending ramifications of such innovation.

Psychological Variables

Impulse Expression (IE). As shown in Table 1 the freshman OPI mean scores differentiated the eventual graduates from the non-graduates on four scales (the ten non-significant scales being of complementary interest). For IE, where $t(128) = -2.19$, $p < .05$, the non-graduate mean score was significantly higher in the direction of a general readiness to express impulses and to seek gratifications either in conscious thought or in overt action. Such individuals tend to fantasize easier, value sensual reactions and feelings, and are more likely to act on the spur of the moment with less regard for practicalities. This tendency might have acted to redirect attention away from the often wearisome demands of academic responsibilities. Comparatively, the graduates, less impulsive, may have had greater tolerance to face such pressure.

Insert Table 1 about here

Personal Integration (PI). This scale most significantly contrasted the two subgroupings, $t(128) = 3.14$, $p < .01$, this 2-tailed probability actually being .002. The graduate mean is at the standardized mean for college freshmen in general whereas non-graduates are in the low score direction which is characterized by tendencies to be aware of personal feelings of isolation and loneliness yet often intentionally avoiding others. Correspondingly, such persons tend to have not yet solidified their self-identity and wonder who they really are, what they should really be, and be like. This proclivity understandably could be seen as a factor that might interfere with the focus and motivation necessary to complete the program's requirements and to become a teacher.

Anxiety Level (AL). This third significantly differentiating scale, $t(128) = 2.05$, $p < .05$, relates with IE and PI (along with SE which was not significant) as being a subgroup of scales used to assess normal ego-functioning in terms of socio-emotional adjustment. Thus it is meaningful that of the four significant contrasts, three of them are located within this cluster of four scales. The non-graduates had a lower AL mean score which is in the direction of stated feelings of higher anxiety. Low scoring individuals tend to be more frequently worried, nervous or tense and may experience difficulty in adjusting to their socio-academic environment. Similarly, there can be related tendencies for such persons to find it hard to keep on tasks, to feel difficulties are piling up, and have periods of considerable restlessness. Thus it might be conceivable that the eventual graduates, compared to the non-graduates, were less prone to effects of stress.

Response Bias (RB). As in the other three significant scales, again the graduate mean score is nearer the standardized mean of 50 and the non-graduate mean is the more discrepant. This contrast, $t(128) = 2.31$, $p < .05$, was almost significant at the .01 level. RB represents a cautious approach to OPI interpretation by assessing the instrument-taking attitude. Extremely high or low individual scores could suggest a deliberate effort to make, respectively, a good or bad impression of self. Within a less pronounced range, however, it tends to indicate an honest measure of positive or negative self-concept. Although the non-graduate mean is lower than that of the graduate and thus suggests a more negative self-image --with ramifications to explain their lack of persistence in the program--it could also be interpreted to mean that they may be more open and aware of their shortcomings, a mature characteristic. Such assumptions, however, are best left within the realm of individual counseling.

Intellectual Disposition Category (IDC). Based primarily on the first four OPI scales and secondarily on the next two, individual profiles are positioned within a continuum of eight categories ranging from 1 (indicating a strongly abstract, scholarly orientation) to 8 (an essentially pragmatic outlook). Neither of these first six scales differentiated between graduates and non-graduates and, of course, nor does the IDC. Both groups fell in the middle range of the distribution, where the total range was 2 to 8, and had similar SDs of 1.2, and these data are very compatible with that found for education students in four other non-Native Indian, cross-cultural samples (Whittaker, 1985). Thus these seven non-significant comparisons strongly indicate that the persistence

dichotomy did not depend upon differences in intellectual disposition but on the socio-emotional syndrome.

Background and Psychological Variables

In order to study the eventual graduate/non-graduate outcome dichotomy and selective background variables in terms of possible interrelationships with the freshman OPI scores, six 2-way ANOVAs were performed using graduation by, respectively, trichotomized age, gender, marital status, Indian status, center locality and entrance year with each of the 14 OPI scales separately. In each case, of course, significant main effects were found for the graduation/non-graduation factor for the same four scales identified in Table 1--IE, PI, AL and RB, and at the same level of probability--and significant main effects were found for the corresponding other background factors for various OPI scales. Significant interactions per OPI scale variable, however, were almost totally absent. Graduation by gender and graduation by locality, nevertheless, each generated one significant interaction and, interestingly, both identified the same scale, Religious Orientation (RO).

Gender and RO. For the graduation by gender interaction on RO, $F(1, 126) = 5.02$, $p < .05$, there was no difference between the means for female graduates (54.1) and non-graduates (54.4). The significant interaction was due to the high male graduate mean (59.2) compared to the male non-graduates (52.5) and the females (all three being nearer the standardized mean). This higher RO score for male graduates is in the direction of being more questioning of conventional religious beliefs and practices, particularly those that are very orthodox or fundamentalistic in nature. The liberal direction noted here is associated with the non-authoritarian syndrome of the instrument (along with Au).

Center locality and RO. The graduation by locality interaction on RO produced an F-ratio of $F(3, 122) = 2.86, p < .05$. In this case the subgroup means all tended to hover around 54.5 except for the male graduates from Kamloops with the highest mean (60.8) and those from Williams Lake with the lowest mean (49.4). This pronounced contrast of one SD between these graduating males suggests the possibility of significant cultural differences in their respective backgrounds in terms of religious acculturation. This appears to be true particularly for the Williams Lake graduating males as the previously discussed significant interaction indicated that graduating males scored higher on RO than non-graduating males.

Discussion

Tinto (1975) developed a conceptual schema that attempted to interrelate the basic factors, suggested by the diverse research literature, that influences the phenomenon of student withdrawal from college. Individual student attributes was a fundamental input variable in this theoretical synthesis and various student characteristics have been of focal interest in successfully applying his model to explain persistence and attrition (Disque, 1983; Healy, 1984). Pascal and Kanowitch (1979) reviewed the research on withdrawal and in analyzing the kinds of data collection used concluded that by necessity the most complex methodology was adopted by the personality studies. Other factors in Tinto's causal model, for example, the input of pre-college academic achievement, is more directly and easily obtainable--and for Native Indian college students, as for college students in general, high school grades are the most powerful one predictor of undergraduate persistence (Astin, 1977; McNamara, 1983). However, the useful assessment of personality, a possibly

sensitive issue due to the very fact of its fundamental importance, eventually must resort to the more sophisticated data collection of some valid, reliable, standardized form of measurement of the modalities of the self. This can be done, hopefully, in a way that has the potential for multiple, positive uses for individuals, programs and the professional field at large.

The significant psychological contrasts generated by the OPI with the unique sample of the present study not only confirms the previous research with traditional college student populations but also validates the instrument as relatively culturally unbiased. Internally oriented, well adjusted males and females, having a positive self attitude and good academic adjustment, had lower IE and higher PI and AL scores than the less well adjusted, the largest significant correlation being between PI and Internal Locus of Control (Keller & Pugh, 1976). Lacher (1973) found that underachievers had high IE and low AL (high anxiety) which lead to significantly more "irresponsible" behaviours and that counselors considered such individuals more difficult to help. High impulsivity and high anxiety are similarly stressed by Tinto's review of individual characteristics associated with college dropouts. Bean (1985) and Brigman & Stager (1980) noted the relationship of low social/personal integration in student dropouts; correspondingly, a positive self-acceptance is related to successful continuation (McIntire & Pratt, 1985; Tracey & Sedlacek, 1985). The negative effect of high levels of stress on Native Indian university students per se has been documented (Blue & Blue, 1981; Degen, 1985)--the former researchers stressing that the identifiable stages of the process of stress appears to be general across cultures. These research findings all relate to the trends that differentiated the graduates from

the non-graduates studied in NITEP. The research findings, as a syndrome, suggest that these personality characteristics are such as to make more difficult the level of adjustment and achievement required in the university setting. This level of psychological dissidence with the academic environment is a crucial factor in persistence (Munro, 1981). Litzau (1984) found that the psychological components and the environmental perceptions were related to Native Indian student survivability, that the psychological dimensions of self-acceptance and socialization tended to be fairly stable and that female college students were more at ease with the college environment--the latter finding parallels the NITEP trend of a 7% higher graduation rate of females over males.

Numerous studies have statistically confirmed attrition trends but few have attempted to explain them and, although dropping out of college is a process rather than an event (Lea, Sedlacek & Stewart, 1979), there are even fewer longitudinal research findings on the subject. The present study, limited in scope and focus, nevertheless attempts specifically to explain the retention/attrition phenomenon, identified over a nine-year span, on psychological grounds, within a unique sample of minority students relatively new to another process, the initiation to the acculturation of university life. Attrition is obviously an extremely complex matter to investigate (Pascarella, 1982) and particularly in understanding the general and special contributing factors impinging on Native Indian students (Jeanotte, 1982).

Personality studies, including this one, "assume" that dropouts are "different" than persisters and attempt to determine the contrasting characteristics, even to the point of describing a "dropout personality". Numerous other interrelating factors, unique to each individual, are

involved and any such study presents a restricted simplified picture. Caution must be exercised therefore, in attempting to interpret, and generalize from, the present findings. Much previous research has perpetuated, often unintentionally, the erroneous inference that attrition can be explained by limited factors or a single equation representing the likelihood of graduation. The astute social scientist, like the legitimate and necessary approach of the psychologist (Bordin, 1966), should remain curious, compassionate and cautious in approaching research findings.

Yet any social scientist, of whatever ethnic background, has a partial perspective of reality and a particular point of view (Hedley, 1973) and in terms of the label "Native Indians" per se, Wall (1985) warns of the two common possibilities for misinterpretation by researchers not as objective as they sometimes believe: overgeneralization or stereotypic treatment. As it is only in the last twenty-five years that Canadian and American Native Indians in any significant numbers have attended college (Haymond, 1983; Martin, 1979; Price, 1982; Pynn, 1986), the level of cultural bias of standardized personality tests, with respect to student comparisons that involve this ethnic group that has been historically underrepresented in the norming procedures, is situationally unique for each subgroup sample and each individual within the sample. Baker et al (1985) recommended that particular care always should be exercised with respect to comparisons across sex or race: they stressed that research samples should include representative members of particular groups if generalizations are to apply to such memberships. The present research respects this limitation.

Use in Counselling

Fox (1982) recommended further study on American Indians at all levels of higher education because data are not plentiful. Literature on the

psychological study of Native Indian students specifically enrolled in teacher education appears nonexistent. And research on Native Indian college students and psychological variables seems limited to a few doctoral dissertations: Ryan (1974) administered the Personality Research Form; Anadon (1978), the American College Testing Interest Inventory; Moses (1979), the Tennessee Self Concept Scale; and Litzau (1984) who used the California Psychological Inventory. Such studies found significant differences with norm or non-Native Indian comparison samples. However, such data often noted that contrasts were more similar than different. The different cultural background of a sample does not necessarily mean an instrument will present substantially different data than that of another cultural group. If it does differ, and for cultural reasons (there being far greater within group than between group differences in all the standardized, psychological tools used), then special, culture-specific norms should and can be developed for particular use in an individualized interpretation to overcome any cultural bias of the instrument.

The local OPI norms developed from the present NITEP study (Whittaker, 1986) indicate that Native Indian means of the sample, as previously mentioned, cluster near the standardized norms, that the IDCs are comparable with other, non-Native Indian, crosscultural, education student samples (Whittaker, 1985), and that the present graduate/non-graduate differentiation reflect similar findings expected from the research literature. The OPI was developed at the Center for Research and Development in High Education, University of California at Berkeley, specifically for college students. That is what the NITEP sample was, albeit a unique subsample of college students as well as a unique subsample of Native Indians (just as college students in general are to the general

population). And that is why the OPI was a useful instrument for counseling Native Indian students and why it is recommended for replication and use with other such subgroups with the development of their own local norms.

Certainly, psychological factors cannot be separated easily from cultural factors, so uniquely are they interwoven within each individual. In real life, attitudes, values, personality and culture are indistinguishably combined as resultant dispositions to think and act in certain ways. It is appreciated that the stress of biculturalism on Native Indian university students can be severe and the literature deals almost exclusively with uni-directional movement into the majority culture. However, for Native people, Berry (1983) noted that the valid measure of modal personality characteristics depends upon acculturation and thus the kind and degree of attainment: the Assimilation Mode towards the dominant culture, the Rejection Mode toward a native-oriented culture, or the Integration Mode toward a synthesis in their character of both cultures. Musgrove's (1982) ethnocentric argument is "that other cultures are often worthy of respect and support but everyone must acquire a mastery of mainstream culture. Social efficiency and, above all, justice requires nothing else" (p. 115). This is pragmatic if uncompromising--and a stressful reality to many minorities.

The Native Indian reality (Manual & Roslun, 1974) is both unique and diverse. Native Indian cultural and spiritual heritage is the ground out of which native identity rises and such cultural dynamics significantly influence the individual self-concept. Native Indian students need to retain their sense of ethnic identity while at the university and not become completely oriented to the pre-empted, majority culture historically

found in higher education. Biculturally, it can be difficult to deal with the varying degrees of discrimination and isolation such students must face in the dominant culture. Within their own ethnic culture there is the possible danger of being perceived as over-educated, elitist, "carbon-copy white", all the while trying to bridge both cultures and atune to the social and political changes taking place in both. Counseling the Native Indian university student, therefore, is particularly challenging and, generally, most effectively done by Native Indian counselors who themselves act as positive models (Dynneson, 1984).

Taking into account the individual student's particular cultural circumstances, a factor to be neither avoided nor over-emphasized, the OPI is recommended to counselors as a useful psychological tool to meaningfully complement other data such as that obtained from records of academic achievement and personal interview. The instrument is one measure of one of the many "realities" which Carl Rogers (1973) felt need not threaten our understanding of self and others but expand and challenge it. The OPI is thus one, standardized indication of self-concept, self-esteem and/or self-insight. Since group means tell nothing about the individual, local means may be necessary to best interpret individual profiles. A number of excellent references have focused upon counseling Native Indian college students (Ariano, 1984; Dynneson, 1984; MacKey, 1979; & Trimble, 1981) and it is at this level that the interaction of the particular demands of a university environment, the culture-specific orientations of an individual, and the psychological self, is appreciated. The degree of excellence of the counselors and clinicians directly affect the successful outcome of programs. The emphasis has now consequently changed from an awareness of "attrition" to an emphasis on "retention". The future, hopefully, will be increasingly promising for Native Indian students in all levels of higher education.

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Table 1

Freshman Mean T-Scores on the 14 Scales of the OPI and IDC

Scale	Graduate (N = 31)	Non-graduate (n = 99)
Thinking Introversion	49.7	47.1
Theoretical Orientation	48.6	46.6
Estheticism	50.8	52.0
Complexity	51.9	52.3
Autonomy	49.5	48.0
Religious Orientation	55.0	53.9
Social Extroversion	46.5	46.0
Impulse Expression	53.5	* → 57.5
Personal Integration	50.4	← ** 44.7
Anxiety Level	49.1	← * 45.5
Altruism	47.5	45.2
Practical Outlook	50.3	52.5
Masculinity-Femininity	46.4	45.1
Response Bias	47.0	← * 42.9
(IDC, Intellectual Disposition)	5.0	5.3

*p < .05

** p < .01